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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,226	02/24/2004	Masanori Takeuchi	110184.01	8354

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

NORRIS, JEREMY C

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,226

Applicant(s)

TAKEUCHI, MASANORI

Examiner

Jeremy C. Norris

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2-24-04 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 and 14-18 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,816,323 (Inoue).

Inoue discloses, referring primarily to figure 1 a flexible wiring board having: a first resin film (top layer); a first wiring film (27), a bottom face of which is embedded into the first resin film; and a second wiring film (28), a bottom face of which is in contact with a surface of the first resin film [claim 1], wherein a surface of the first wiring film is flush with a surface of the second wiring film [claim 2], wherein at least one third opening is formed in a part of the first resin film where the first wiring film is disposed [claim 6], wherein a metal bump is located in at least one of the third openings [claim 9], wherein the first resin film has a flat surface at an opposite side to where the first and second wiring film are disposed [claim 10], wherein the first wiring film and the second wiring film each extend an equal amount along a width direction, the width direction being a direction that is parallel to or substantially parallel to the surface of the first resin film [claim 14], wherein the first wiring film and the second wiring film each extend a substantially equal amount along a width direction, the width direction being a direction that is parallel to or substantially parallel to the surface of the first resin film [claim 15],

wherein the first wiring film extends a greater amount in a thickness direction than the second wiring film, the thickness direction being a direction that is perpendicular to or substantially perpendicular to a plane along which the surface of the first resin film extends [claim 16], wherein: the first wiring film includes a second surface that is substantially opposite to the surface of the first wiring film that is flush with the surface of the second wiring film, the second wiring film includes a second surface that is substantially opposite to the surface of the second wiring film that is flush with the surface of the first wiring film, the second surface of the first wiring film extends substantially along a first plane the second surface of the second wiring film extends substantially along a second plane, and the first plane is different from the second plane [claim 17].

Similarly, Inoue discloses, a flexible wiring board having: a first resin film (2nd layer from top); a first wiring film (27), a bottom face of which is embedded into the first resin film; and a second wiring film (shown not referenced), a bottom face of which is in contact with a surface of the first resin film [claim 1], wherein a second resin film (top layer) is formed on the surfaces of the first and second wiring films [claim 3], wherein at least one first opening is formed in the part of the second resin film where the first wiring film is disposed [claim 4], wherein at least one second opening is formed in a part of the second resin film where the second wiring film is disposed [claim 5], wherein a metal bump is located in at least one of the first openings [claim 7], wherein a metal bump is located in at least one of the second openings [claim 8].

Additionally, Inoue discloses, the intermediate product of a flexible wiring board having a first resin film (top layer), and a metal foil (27) wherein the metal foil has a thin film part and a thick film part connecting to the thin film part, the thick film part has a larger thickness than a thickness of the thin film part and is connected to the thin film part, a surface of the metal foil is flush, a part of a bottom face of the metal foil, where the thick film part is disposed, is embedded into the first resin film, a part of the bottom face of the metal foil, where the thin film part is disposed, is in contact with a surface of the first resin film, and the first resin film has a flat surface in an opposite side to where the metal foil is disposed [claim 11], wherein the surface of the metal foil that is flush extends along the thick film part and the thin film part, and is opposite to the bottom face of the metal foil [claim 18].

Allowable Subject Matter

Claims 12 and 13 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Claim 12 states the limitation "a first bump is arranged in the first opening, the wire of the second flexible wiring board is connected to the first wiring film by the first bump, a second bump is arranged in the second opening, the wire of the second flexible wiring board is connected to the second wiring film by the second bump". This limitation, in conjunction with the other claimed features, was neither found to be disclosed in nor suggested by the prior art.

Response to Arguments

Applicant's arguments with respect to claims 1-11 and 14-18 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCSN


KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2801